



US DEPARTMENT OF DEFENSE

## **BLAST INJURY RESEARCH PROGRAM COORDINATING OFFICE**

### **Diagnostics**

#### **DTI findings and Post-Concussion Symptom Reporting Six Weeks Following mTBI**

Researchers at the NICoE investigated potential relationships between posttraumatic micro-architecture of the white matter and post-concussion symptom reporting. Participants were evaluated using DTI, neurocognitive testing and self-report assessments, with these assessments occurring six to eight weeks after injury. Participants included 108 individuals who suffered an orthopedic injury, with 72 experiencing mTBI and 36 experiencing trauma. The latter group served as the control group. The mTBI group was further divided based on International Classification of Diseases-10 criteria for PCS—a PCS-absent and a PCS-present group. The results demonstrated no differences in cognitive function across the three groups, although the PCS-present group self-reported great anxiety and depression symptomatology. In the two mTBI groups, no differences were observed in the imaging data, although comparing the PCS-present group to the control group did reveal diffusivity differences. Therefore, individuals suspected of experiencing a TBI should be evaluated using different assessment modalities.